

*Application No.: 10/581,283
Amendment dated March 26, 2009
Reply to Office Action dated January 23, 2009*

*Docket No.: 4601-0113PUS1
Art Unit: 3725
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REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-32 are pending, of which claims 16-21 and 26-31 are withdrawn. No claims have been amended. Claim 1 is independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Allowable Subject Matter

The Examiner states that claims 8 and 32 would be allowable if rewritten in independent form.

Applicants thank the Examiner for the early indication of allowable subject matter in this application. However, claims 8 and 32 have not been rewritten in independent form at this time, since it is believed that independent claim 1 from which these claims depend is allowable.

Examiner Interview

If, during further examination of the present application, any further discussion with the Applicants' Representative would advance the prosecution of the present application, the Examiner is encouraged to contact Carl T. Thomsen, at 1-703-208-4030 (direct line) at her convenience.

Drawings

It is gratefully appreciated that the Examiner has indicated that the drawings have been accepted.

Claim for Priority

It is gratefully appreciated that the Examiner has acknowledged the Applicants' claim for foreign priority based on AU 2003906722.

Restriction Requirement

The Examiner has made the Restriction Requirement final, and has withdrawn claims 16-21 and 26-31 from further consideration.

Rejections Under 35 U.S.C. §102(b)

Claim 1-7 and 10-15 stand rejected under 35 U.S.C. §103(a) as being anticipated by Ohama et al. (U.S. 6,044,684);

claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ohama et al. in view of Ross (U.S. 3,802,248); and

claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ohama et al. in view of Daido Steel Co. Ltd. (JP 58-218339).

These rejections are respectfully traversed.

Arguments Regarding Independent Claim 1

Based on a careful review of the Ohama et al. document, the Applicants submit that this document fails to teach or suggest the combination of elements set forth in independent claim 1, at least for the following reasons:

The Examiner has stated in the Office Action that "Ohama et al. disclose a die apparatus for performing a flashless forging operation to manufacture the *toothed portion of* JMS/CTT/ktp

a steering rack..." However, Ohama et al. do not disclose anything at all related to steering racks. The die apparatus disclosed in Ohama et al. is for forging constant velocity universal joints, and it cannot be adapted to manufacture the toothed portion of a steering rack. The Examiner goes on to state "... said die apparatus comprising: first (26) and second (14) die members and at least one punch member (40 or 36), each having a forming surface shaped substantially as the obverse of a portion of *said toothed portion...*"

None of the items 26, 14, 40, or 36 of Ohama et al. has a forming surface shaped like the obverse of a portion of the toothed portion of a steering rack. Instead, these items all have forming surfaces shaped as the obverse of a portion of a constant velocity universal joint.

Furthermore, the die apparatus disclosed in Ohama et al. does not have the feature of "wherein said first and second die members are movable towards each other to a closed position thereby *partially forging* said toothed portion," as set forth in independent claim 1. Fig. 1 of Ohama et al. merely shows the die apparatus in an open position, and Fig. 5 shows the die apparatus in a closed position, the die members having been moved towards each from the open position shown in Fig. 1. In moving from the open position of Fig. 1 to the closed position of Fig. 5, no forging of the material 56 has occurred. This is indicated by the material 56 being the same shape in both figures, and Fig. 5 does not indicate any penetration of the die members into the material 56. Therefore it cannot be said that the material 56 has been "*partially forged*" as the die members moved towards each other to a closed position.

The Examiner has made reference to column 6, lines 1-9 of Ohama et al. to support the statement that Ohama et al. discloses this feature of independent claim 1, but this text does mention or even infer “partially forging.” The text does state that the “segmented dies 26” are “pressed towards the central axis of the material,” but this does not infer that any forging of the material has occurred.

Paragraphs [0034] to [0038] of the present specification (US Publication No. 2007/0079643 A1), with reference to Figs. 3a to 3d, describe an embodiment of the present invention that makes clear the meaning of the feature “wherein said first and second die members are movable towards each other to a closed position thereby *partially forging* said toothed portion,” as set forth in independent claim 1. Fig. 3a shows the die apparatus in an open position, and Fig. 3c shows the die apparatus in a closed position. The blank 12a is “partially forged” as the die apparatus moves to the closed position of Fig. 3c as indicated by the change of shape of the blank 12a, and by the description at paragraph [0037].

At least for the reasons explained above, the Applicants respectfully submit that the combination of elements as set forth in independent claim 1 is not disclosed or made obvious by the prior art of record, including Ohama et al.

Therefore, independent claim 1 is in condition for allowance.

Dependent Claims

All dependent claims as previously presented are in condition for allowance due to their dependency from allowable independent claims, or due to the additional novel features set forth therein. For example:

Regarding Dependent Claim 6 as Previously Presented

The Examiner has considered items 26 and 14 of the die apparatus disclosed in Ohama et al. as corresponding to the first and second die members as set forth in independent claim 1, and the Examiner has considered items 36 and 40 as corresponding to the first and second punch members as set forth in dependent claim 6. However, the die apparatus disclosed in Ohama et al. does not have the feature of the first and second punch members being disposed “*between* said first and second die members,” as set forth in dependent claim 6. The “punch members” 36 and 40 of Ohama et al. are not “*between*” the “first and second die members” 26 and 14. Instead the “punch member” 40 slides in a bore in “die member” 14, and “punch member” 36 slides in a bore in another die element 18. There are no die elements “*between*” the “die members” 26 and 14. This is clear from Fig. 6 of Ohama et al., which shows “die members” 26 and 14 contacting each other so there is no gap for anything to be between them.

In contrast, Figs. 6a to 6b of the present specification show an embodiment of the present invention in which the two punch members 58 are clearly “*between*” the die members 54 and 56.

Regarding Dependent Claim 7 as Previously Presented

The Examiner has stated that column 5, lines 4-6 and 16-19 of the Ohama et al. document disclose the feature of “wherein said punch member is moveable by means of a mechanism operated by the motion of said die apparatus closing.” However, these lines of Ohama et al. actually state that the punches 36 and 40 are each movable by “an unillustrated driving unit”, and no further detail is given as to what these “driving units” may comprise. There is no indication that these punches are moved by “means of a mechanism operated by the motion of said die apparatus closing.”

Figs. 8, 9, and 10 of the present specification show an embodiment of the invention having punch members that are “moveable by means of a mechanism operated by the motion of said die apparatus closing.” The “mechanism” comprises “wedge members” 89, “blocks” 88, and “springs” 90. The mechanism is “operated by the motion of said die apparatus closing” in that the “bolster” 84 contacts the top of the “wedge members” 89 as the die closes, as described at paragraph [0049].

All claims as previously presented are in condition for allowance
Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a) are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030(direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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By James M. Slattery
James M. Slattery
Registration No.: 28,380
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

Ota
JMS/CTT/ktp